

## **WATER AND WASTEWATER UTILITIES**

### ***Introduction***

The county Water and Wastewater Facilities Plan was adopted in 1999, and addresses countywide water and wastewater system maintenance and expansion through the year 2025. As with other elements of the Public Facilities Plan, this planning effort incorporated projected population growth and the county's land use plans in evaluating future needs. Water and wastewater system improvements are suggested, along with an implementation and capital cost plan. While the Water and Wastewater Facilities Plan is based on substantial growth in the existing service area, it promotes orderly growth and efficient system expansion by avoiding the extension of water and sewer pipelines through undeveloped areas to remote new development. The Water and Wastewater Facilities Plan specifies improvements designed to increase the quality and reliability of the existing system as well as growth driven improvements which are set forth in five-year increments.

### ***Water System Improvements***

The Swift Creek Reservoir and the Appomattox River Water Authority (ARWA) have served as the county's water supply in past years. An increasing amount of water will be obtained from the City of Richmond through a purchase agreement. The county's current water supply is 64.5 million gallons per day (mgd). Additional treatment capacity should be available from ARWA as future demands require. Recommended system expansion over the planning period includes new pumping stations, storage tanks, water mains, and pressure zone/service area improvements.

### ***Wastewater System Improvements***

Wastewater treatment is currently provided primarily by two county treatment plants, Falling Creek and Proctors Creek. Richmond and Petersburg city treatment plants service about ten percent of the county's wastewater volume. The current combined capacity of the Falling Creek and Proctors Creek facilities is 37.1 mgd. The next expansion of the Proctors Creek treatment plant will extend system capacity to 50 mgd, and make discharge quality improvements. Effluent quality is currently well within permit discharge limits at both plants. Recommended system expansion over the planning period includes new and expanded pumping stations, and conveyance system expansions. For more information, contact the Utilities Department, at 751-1291.

### ***Funding of Improvements (Background/Analysis)***

Quality and reliability improvements will be implemented as infill occurs, generating revenue from connection fees. Improvements that are growth driven (i.e. that are needed by proposed development beyond the existing service area) should be scheduled concurrent with the proposed development. In cases when a required improvement can only be constructed if other facilities are already in place (i.e. a prerequisite improvement), construction of the improvement will be required at developer expense. Water mains and trunk sewers needed to serve new development are designed, constructed and funded by the developer.

Water storage tanks, water and wastewater pumping stations and water and wastewater treatment plant expansions are funded through the collection of capital recovery charges. This program insures proper funding of facilities to serve new county residents through user charges.

Extensions of public water and wastewater systems into existing residential and commercial areas that were developed using private wells and septic systems can be funded by the creation of "special tax" or "assessment" districts. The Board of Supervisors can create an assessment district after holding a public hearing. All properties within the boundaries of an assessment district are assessed for a portion of the cost of the water or wastewater line, which can be paid as a lump sum, or in bi-annual payments over a period, not to exceed 20 years. System capacity to allow service to these areas has been anticipated in the Water and Wastewater Facilities Plan.